Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application.

1. (Currently amended) A process for polymerizing, in a first polymerization, ethylene or a mixture of ethylene with at least one olefinic monomer selected from ~~ethylene,~~ propylene, ~~and~~ 1-butene, 1-pentene, 1-hexene, or 1-octene in a first loop reactor in the presence of a polymerization catalyst at from 20 to 150°C, but below the melting point of a polymer to be formed, and a pressure of from 43 to 80 bar, wherein the polymer formed is present in a suspension in a liquid or supercritical suspension medium, wherein the suspension is circulated by means of an axial pump, wherein the polymerization is carried out at an average solids concentration in the reactor of more than 53% by weight, based on the total mass of the contents of the reactor, in the case of continuous product discharge, and at an average solids concentration in the reactor of more than 45% by weight, based on the total mass of the contents of the reactor, in the case of discontinuous product discharge, and wherein the polymerization is carried out at an ~~olefinic monomer~~ ethylene concentration of at least 10 mol%, based on the suspension medium.

2. (Previously amended) The polymerization process as claimed in claim 1, wherein the loop reactor comprises a cyclic reactor tube comprising a diameter varying by at least 10%, based on a predominant reactor tube diameter, and in which there is at least one widening and narrowing in a region other than that of the axial pump.

3. (Previously amended) The process as claimed in claim 1, wherein the loop reactor comprises a cyclic reactor tube, and wherein there is a widening and narrowing of the reactor tube in the region of the axial pump.

4. (Canceled).

5. (Canceled).

6. (Previously amended) The process as claimed in claim 1, wherein the loop reactor comprises a cyclic reactor tube, and wherein the at least one olefinic monomer is fed in at least 2 points along the reactor tube.

7. (Previously amended) The process as claimed in claim 1, wherein the polymer formed is discharged continuously from the reactor.

8. (Currently amended) The process ~~for polymerizing~~ as claimed in claim 1, wherein the first polymerization in the first loop reactor is preceded or followed by at least one further polymerization step in a second loop reactor or a gas-phase reactor.